

**Utah Division of Oil, Gas and Mining  
Guidance Document**

**April 2004**

**Preparing an Application for Permit to Drill (APD)**

This document is intended to assist operators or others in preparing an APD to be submitted to the Division for approval. It should be noted that the best way to assure the shortest turn-around time on applications is to submit a complete and technically adequate package.

**FOR FURTHER INFORMATION CONTACT:**

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## **Introduction**

The Utah Department of Natural Resources, Division of Oil, Gas, and Mining (“the Division”) has regulatory authority for permitting all oil and gas wells drilled in the State of Utah. For any wells drilled on Federal or Indian mineral leases the Division shares this authority with the Bureau of Land Management (BLM). An Application for Permit to Drill (APD) must be filed with the Division for all oil and gas wells drilled, deepened, or plugged back, in the State of Utah.

When an APD is received by the Division it is first assigned an API number. The submitted document is then evaluated to determine if the application is complete and if the proposed location complies with applicable siting and spacing rules. When the application is determined to be complete and that the operator is sufficiently bonded, an onsite evaluation will be scheduled with the operator. An onsite evaluation will be done by the Division staff for all wells with State or Private surface ownership. If a proposed well is located on Federal or Indian surface ownership the BLM is responsible for onsite evaluation. If the proposed well is on a State or Privately owned mineral lease, the Division staff will then evaluate the proposed drilling, casing and cementing programs. When all applicable rules are satisfied and proper evaluations are completed a Permit to Drill will be issued.

The Division and its staff will make every effort to process each permit application in a timely and efficient manner. A complete application package, submitted by the operator, which contains all of the required information will assure that the process moves along as quickly as possible.

**Rules Summary:** **Definitions:** Applicable definitions are; Authorized Agent, Correlative Rights, Development Wells, Director, Division, Field, Gas, Gas Well, Horizontal Well, Interest Owner, Oil Well, Operator or Designated Agent, Owner, Person, Pool, Producer, Temporary Spacing Unit, Waste, Well, Well Site, Wildcat Wells, Working Interest Owner.

**Scope and Application of Rules:** Rules apply to all lands in the State lawfully subject to the State’s power.

**Unit Agreements:** The Board may suspend rules or orders or parts thereof with regard to any federal unit agreement so long as the conservation of oil and gas and prevention of waste is accomplished.

**Designation of Agent or Operator:** A designation is filed prior to commencement of operations to allow an agent to fulfill obligations of the owner.

**Bonding:** An owner or operator shall furnish a good and adequate bond or evidence of one to the Division prior to approval of a permit to drill, reenter or assume responsibility as operator of existing wells.

**Location and Siting:** In areas not spaced by Board Order, oil and gas wells shall be located in a 400 foot square window in the center of a 40 acre quarter-quarter section, and no closer than 920 feet from another well in the same pool. The Division can administratively determine pattern location and siting of wells adjacent to a spaced area, an area under consideration for spacing or adjacent to a unitized area to ensure orderly development of the pool.

The surface location for a horizontal well may be anywhere on the lease and a temporary 640 acre spacing unit is established for orderly development of the anticipated pool. Notice of an APD shall be given by certified mail to all owners within the temporary spacing unit.

In absence of special orders of the Board, no portion of the productive horizontal interval shall be closer than 660 feet from a drilling or spacing unit boundary, unit boundary, uncommitted tract within a unit, or uncommitted lease boundary or closer than 1320 feet to a vertical well producing from the same formation.

In federal units most requirements of rule for location and siting of horizontal wells do not apply.

**Exception to Location and Siting of Wells:** The Division can administratively grant exception to location and siting requirements of rule or order on receipt of: an application, consent from owners within 460 foot radius in non-spaced areas or consent from direct or diagonal offset drilling unit owners in spaced areas (we are interpreting this to mean only direct and offset drilling unit owners which are being encroached upon by the exception location).

The application for an exception shall contain the following:

- reasons for the exception

- plat showing; the legal location, the proposed location, legal locations directly or diagonally offsetting the proposed location, names of all owners of all lands within a 460 foot radius, or directly or diagonally offsetting drilling units

No exception shall prevent any owner from drilling a legal location on adjacent lands, directly or diagonally offsetting the exception.

The Board or Division may take such action to offset any advantage the person securing the exception may obtain over other producers by reason of the exception location.

**Permitting of Wells to be Drilled, Deepened or Plugged-**

**Back:** Prior to drilling a well or creating any surface disturbance preparing to drill one, the operator shall obtain an approved APD. The Division shall give approval if the location and operations are not in violation of any rule or order. The APD shall include:

- Form 3 (Application to Drill, Deepen or Plugback)
- contact phone number
- lease type
- unit
- location plat
- Water Rights approval
- estimated geologic markers
- estimated top and bottom of anticipated water, oil, gas, other mineral zones and plans for protection of them
- plan for pressure control (BOPE)
- description of mud system
- plans for testing, logging and coring
- expected bottomhole pressure, any anticipated abnormal pressures, temperatures or hazards and plans for mitigation of them
- diagram of horizontal well bore path
- designation of agent if necessary

A change of location or drilling program requires an amended APD and approval.

APDs shall be held in abeyance while there are spacing matters before the Board for the area except in circumstances involving lease or contract termination.

**Directional Drilling:** An application for directional drilling may be approved by the Division without notice and hearing if the applicant owns all oil and gas within 460 feet of all points along the intended well bore. An application for directional drilling shall also include:

- name and address of operator
- lease name, well number, field, reservoir, county
- plat showing surface location, section and lease lines, target location, points along the well bore where owner consent has been obtained
- reason for deviation
- signature of designated agent or representative

**Drilling in Hydrogen Sulfide Areas:** In areas known or expected to contain H<sub>2</sub>S or where the potential is unknown, the APD shall include a written contingency plan. The plan and location shall meet the requirements of R649-3-12.

**On-site Predrill Evaluation:** The Division shall conduct an on-site evaluation for locations on state or private land no later than 30 days after receipt of a complete APD or prior to receiving a complete APD at the written request of the operator. Special stipulations concerning surface use or justifications for spacing exceptions may be addressed and developed at the predrill evaluations.

**Completion Into Two Or More Pools:** If oil or gas is to be produced from two or more pools through a single casing string, the operator must file an application with the Division as outlined in R649-3-22.

**Multiple Mineral Development:** In areas involving development of mineral resources other than oil and gas, operators may enter into cooperative agreements as defined by rule. There may be special requirements for drilling within these areas.

**Designated Potash Areas:** Drilling in designated potash areas (Paradox Formation salt section) requires applicable mud type, logging through the section, a directional survey, cement of the appropriate type cementing casing through the potash section, and notice of the APD to all owners within 2,640 foot radius of the proposed well.

**Workable Coal Beds:** Prior to drilling on lands containing mine workings the operator shall copy the APD and plat to coal owners and lessees within a 5,280 foot radius of the proposed well. The casing shall be set at least 50 feet above and below the seam and cemented solidly. A cement bond log shall be run and submitted to the Division upon request. Upon penetrating a coal bed the operator shall notify the Division in writing before completing or plugging the well.

**Underground Mining Operations:** Prior to drilling in areas of known or suspected underground mining, solution mining, surface mining, or surface evaporation ponds the operator shall supply the Division with known information about the name and address of the mine owner or operator.

**Designated Oil Shale Areas:** Prior to drilling the operator must provide a copy of APD and plat to all oil shale owners or lessees within a 2,640 foot radius and notice of plugging prior to plugging. Electric logs must be run through the oil shale section. Casing must be run and cemented through the section. Intentionally deviated wells must have a directional survey run. The Board may issue an order requiring directional surveys and addressing other issues such as liability, costs and responsibilities. The operator shall use generally accepted techniques to keep the well bore within an intact core of a mine pillar. Required directional surveys shall be run within 20 days of reaching total depth or before completion, whichever is earlier.

**Drilling Procedures in the Great Salt Lake:** As part of the APD the operator shall include: name of the drilling contractor, rig number and type, map(s) showing the boundaries of all state or federal parks, wildlife refuges, or waterfowl management areas, locations of all evaporation pits, producing wells, structures, buildings, and platforms within one mile of the proposed well, and an oil spill emergency contingency plan. Special drilling procedures are required but are not summarized here. Refer to R649-3-33 for specifics.

**Well Site Restoration:** The operator shall make a reasonable effort to establish a surface use agreement with the owners of land included in the well site prior to commencement of drilling a new well or reentering an abandoned well. Prior to the Division approval of an APD the

operator shall submit an affidavit to the Division stating whether surface use agreements have been established. If no agreement can be established the Division shall establish minimum well site restoration requirements for wells located on private surface for the purposes of final bond release.

**Wildcat Wells:** An operator must file an application with the Division for designation of a wildcat well for purposes of qualifying for a severance tax exemption. This application can be filed prior to drilling for a tentative determination or with the completion report. We are currently accepting the APD for this purpose, in most cases. If more information is needed or the operator does not agree with the Division's determination, an application for wildcat designation can be filed containing the following:

- plat map showing wells within a one mile radius
- statement about the formation(s) in the subject well and other producing wells in the area
- completion reports of wells in area
- bottomhole pressure data on the subject well and others producing in the area
- stratigraphic cross sections through the subject well and others producing in the area
- statement as to whether the subject well is in a known geologic structure
- other relevant information

**Resource Development Coordinating Committee (RDCC):** The RDCC assists the State Planning Coordinator in fulfilling the responsibilities of reviewing and coordinating technical and policy actions which may affect the physical resources of the state and facilitate the exchange of information on such actions among State agencies and other levels of governments. All APDs for wells located on State and Fee land, if the proposed well is not in a spaced area, a unit, an established field, or within one mile of an established field, are submitted to RDCC for review and comment prior to approval.

**School And Institutional Trust Lands Administration (SITLA):** APDs for all wells located on land managed by SITLA will be forwarded to SITLA for Historic Preservation review and clearance prior to approval by the Division.

**The following information, although not required specifically by rule, would help in preparing the pre-drill onsite evaluation for wells on State or Private land:**

**Current Surface Use:** Describe all the known current surface use at the site, examples are grazing, recreation, mining, prospecting, and hunting.

**Proposed Surface Disturbance:** Describe the proposed surface disturbance including all access areas, which will be disturbed for the purpose of drilling this well.

**Existing Wells:** List all existing wells within a mile radius or attach a map showing wells in the area. This should include water wells of which a list can be obtained from Division of Water Rights or from their web page.

**Production Facilities and Pipelines:** Describe the possible location and type of production facilities and pipelines planned for this well if it is productive.

**Source of Construction Material:** Describe where any additional materials that will be transported to the site will be obtained. This includes gravel, and fill needed to construct the location and access.

**Ancillary Facilities:** Describe the type and location of any ancillary facilities planned for the well. This includes such items as trailer houses or other things not usually considered part of the drilling equipment.

**Waste Management Plan:** Describe the plans for handling the expected wastes to be generated at the site. This includes such items as oil, produced water, trash, drilling mud, cuttings, completion fluids, used oil, and septic waste from trailers.

**Affected Floodplains/Wetlands:** Describe any floodplain, streams, drainages, and/or wetland areas that could be affected by the location or access.

**Flora/Fauna:** List the common plants found and animals using the area.

**Paleontological Potential:** Describe any evidence you observe (or lack thereof) indicating paleontological potential, including the surface formation and depositional environment. Have any paleontological surveys been done or communication with the UGS concerning paleontological potential of the proposed site.

**Reserve Pit:** Briefly describe the reserve pit to be constructed including size, depth, position on site, amount of cut and fill and liner requirements. Mud system to be used can be mentioned here also.

**Surface Restoration:** Briefly describe the plans for restoration of the site after P&A or partial restoration prior to P&A.

## **APPLICABLE RULES**

- R649-1-1. Definitions.
- R649-2-1. Scope of Rules.
- R649-2-2. Application of Rules to Lands Owned or Controlled by the United States.
- R649-2-3. Application of Rules to Unit Agreements.
- R649-2-4. Designation of Agent or Operator.
- R649-3-1. Bonding.
- R649-3-2. Location And Siting Of Vertical Wells and Statewide Spacing for Horizontal Wells.
- R649-3-3. Exception to Location and Siting of Wells.
- R649-3-4. Permitting of Wells to be Drilled, Deepened or Plugged-Back
- R649-3-11. Directional Drilling.
- R649-3-12. Drilling Practices For Hydrogen Sulfide Areas And Formations.
- R649-3-16. Reserve Pits and Other Onsite Pits.
- R649-3-18. On-site Predrill Evaluation.
- R649-3-22. Completion Into Two Or More Pools.
- R649-3-27. Multiple Mineral Development.
- R649-3-28. Designated Potash Areas.
- R649-3-29. Workable Coal Beds.
- R649-3-30. Underground Mining Operations.
- R649-3-31. Designated Oil Shale Areas.
- R649-3-33. Drilling Procedures in the Great Salt Lake.
- R649-3-34. Well Site Restoration (Surface Agreements)
- R649-3-35. Wildcat Wells.
- R649-8-1. General Report Forms.

## **FORMS**

- R649-8-4. Form 3, Application for Permit to Drill, Deepen, or Plug Back (APD).
- R649-8-5. Form 4, Bond.
- R649-8-6. Form 5, Designation of Agent or Operator.
- APD Preparation Checklist
- Request for Permit Extension Validation
- Request to Transfer Application or Permit to Drill



# The Permitting Process

